

INFORMATION REPORT

COUNTRY USSR
SUBJECT D-107 Excavator-Crane

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Although the following text presumably represents the first-hand observations of source, its tone nevertheless suggests that at least some of the facts may have been extracted from Soviet publications. There has been no opportunity to determine the text's basic origin.

Serial Production of Excavator-Cranes in Kevrev

1. The excavator plant in Kevrev (Vladimir oblast) has begun serial production of the D-107, a crawler-mounted Diesel-driven excavator-crane which is described as indispensable to urban rehabilitation, rubble and stump removal, foundation digging and road and railway construction.
2. The plant reportedly is improving production methods and has shortened production time per machine by 1,000 man-hours.

Description of Excavator-Crane

3. The machine has a bucket capacity of 17.6 cubic feet and can lift a load 11.5 feet. When operating as an excavator, it can remove four bucket loads per minute, or 22-25 thousand cubic feet of earth per eight-hour shift.
4. Though powered by an 80 hp Diesel engine, the machine is seven tons lighter than previous models with the same capacity bucket. The lighter working weight of 19.2 tons, with average pressure of 3.5 lbs per inch on the ground, is said to make the machine highly maneuverable.
5. The hydraulic control system works by means of a balanced cylindrical slide valve mounted with small handles on a panel in front of the operator's seat. An oil pressure of 40 atmospheres in the hydraulic system reportedly increases efficiency 15-20%. The turning platform operates on roller bearings and is lubricated by a central liquid system.
6. Other basic characteristics are:

Maximum cutting radius	26 ft.
Maximum loading radius	23.6 ft.
Maximum loading height	15 ft.

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Turning platform rotation:	
for excavating work	6 rpm
for crane work	3 rpm
Maximum lift angle	25 degrees
Speeds of carriage motion:	
First	0.9 mph
Second	1.8 mph

Proposed Use

- The D-107 is expected to become the principal type of mechanical shovel and crane for earth removal and loading operations in Soviet transportation, after designers have solved the problem of mounting the turning part on an automobile chassis or railway car instead of the present caterpillar tractor.

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